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10/713,612	11/14/2003	Bryan M. Cantrill	03226.338001; SUN040165	7007

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OSHA LIANG L.L.P./SUN
1221 MCKINNEY, SUITE 2800
HOUSTON, TX 77010

EXAMINER

NGUYEN, PHILLIP H

ART UNIT	PAPER NUMBER
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2191

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/19/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/713,612	CANTRILL, BRYAN M.	
	Examiner	Art Unit	
	Phillip H. Nguyen	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20040205</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the original filing of November 14, 2003. Claims 1-20 are pending and have been considered below.

Drawings

2. The drawings are objected to because FIGURE 4, item 404 was never defined in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: The specification needs to identify item 404 in FIGURE 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-4, 9, 13-14, and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Vasudeva (United States Patent Application Publication No.: US 2004/0267691 A1).

As per claim 1:

Vasudeva discloses a method for storing a data set having an enabled probe identification component and an associated data component comprising:

- a. obtaining data from an instrumented program using a probe

("performed code may be inserted into the source code... probe... may be embedded in the domain, such as an operating system, application or other

domain. The probes... may be controlled to gather a different level or type of data and at different frequencies” Paragraph 0058);

b. associating the data with an enabled probe identification (“the probe may allocate a queue to store data received by each probe” Paragraph 0062, which means, each probe associating with the data it’s gathering); and

a. storing the data in the data set, wherein the enabled probe identification is stored in the enabled probe identification component and the data is stored in the associated data set component (“the probe may allocate a queue to store data received by each probe... receive data from the associated or attached probes and may store an identifier for the probe” Paragraph 0062);

As per claim 2:

Vasudeva discloses the method as in claim 1 above; and further discloses:

a. defining a tracing function wherein the tracing function comprises an action (“a data structure for controlling collection of data” Paragraph 0053);

b. associating the action with the enable probe identification (“the probe application 253 may include a data structure for controlling collection of data by the probes206” Paragraph 0053, each probe has an identifier); and

c. associating the probe with the enable probe identification (“may store an identifier for the probe” Paragraph 0062).

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As per claim 3:

Vasudeva discloses the method as in claim 2 above; and further discloses:

wherein the tracing function is defined by a consumer (**"a user may control the operation of the system probes 206 and application probes 222..."** Paragraph 0051; **"the probe application 253 may include a data structure for controlling collection of data by the probes 206 and application probes 222..."** Paragraph 0053, since the user controls the operation of the system, the user is defined the data structure for controlling collection of data by the probes).

As per claim 4:

Vasudeva discloses the method as in claim 3 above; and further discloses:

wherein the enabled probe identification is defined on a per-consumer basic (**"a user may control the operation of the system probes 206 and application probes 222 by selecting new operating parameters... may store the new operating parameters in the probe table with the probe identification for the probe or probes..."** Paragraph 0051, each user controls the operation of the system, and therefore, probe identification is defined per user).

As per claim 9:

Vasudeva discloses the method as in claim 1 above; and further discloses:

wherein the data set is stored in a kernel-level buffer ("**Each system probe 206... may use a JAVA™ Native Interface (JNI) to look into the operating system kernel data structures or kernel system libraries 208 to access performance metric data**" Paragraph 0040).

As per claim 13:

Vasudeva discloses a system for storing a data set, wherein the data set comprises an enabled probe identification component and a data component, comprising:

- a. a probe obtaining data from an instrumented program ("**performed code may be inserted into the source code... probe... may be embedded in the domain, such as an operating system, application or other domain. The probes... may be controlled to gather a different level or type of data and at different frequencies**" Paragraph 0058);
- b. a tracing framework associating the probe with an enabled probe identification ("**the probes application 253 may include a data structure for controlling collection of data**" Paragraph 0053, **each probe has an identifier to identify the data it's gathering**);
- c. a buffer storing the data set, wherein the data is stored in the data component and the enabled probe identification is stored in the enabled probe identification component ("**the probe may allocate a queue to store data**

received by each probe... receive data from the associated or attached probes and may store an identifier for the probe” Paragraph 0062).

As per claim 14:

Vasudeva discloses the system as in claim 13 above; and further discloses:

a consumer defining an action, wherein the tracing framework assigns the enabled probe identification to the action (“**a user may control the operation of the system probes 206 and application probes 222...**” Paragraph 0051; “**the probe application 253 may include a data structure for controlling collection of data by the probes 206 and application probes 222...**”

Paragraph 0053, **since the user controls the operation of the system, the user is defined the data structure for controlling collection of data by the probes).**

As per claim 17:

Vasudeva discloses the system as in claim 14 above; and further discloses:

wherein the enabled probe identification is defined with respect to the consumer (“**a user may control the operation of the system probes 206 and application probes 222 by selecting new operating parameters... may store the new operating parameters in the probe table with the probe identification for the probe or probes...**” Paragraph 0051, **each user controls**

the operation of the system, and therefore, probe identification is defined with respect to the user).

As per claim 18:

Vasudeva discloses a system for storing a data set, wherein the data set comprises an enabled probe identification component and a data component, comprising:

a. a probe obtaining data from an instrumented program ("**performed code may be inserted into the source code... probe... may be embedded in the domain, such as an operating system, application or other domain. The probes... may be controlled to gather a different level or type of data and at different frequencies**" Paragraph 0058);

b. a tracing framework assigning an enabled probe identification to an action and associating the probe with the enabled probe identification ("**the probes application 253 may include a data structure for controlling collection of data**" Paragraph 0053, **each probe has an identifier to identify the data it's gathering**); and

c. a per-consumer buffer storing the data set ("**a queue**" Paragraph 0062),

i) wherein the data is stored in the data component and the enabled probe identification in the enabled probe identification component ("**the probe may allocate a queue to store data received by each probe...**

receive data from the associated or attached probes and may store an identifier for the probe” Paragraph 0062); and

ii) wherein the enabled probe identification is assigned to the action defined by the consumer associated with the per-consumer buffer (“a user may control the operation of the system probes 206 and application probes 222 by selecting new operating parameters for their respective control modules... the base station 210 may store the new operating parameters in the probe table 218 with the probe identification for the probe or probes” Paragraph 0051 “).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5-8, 10-12, 15-16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasudeva (United States Patent Application Publication No.: US 2004/0267691 A1) as applied to claim 1 above, and further in view of Meek et al. (United States Patent No.: US 6,362,779 B1).

As per claim 5:

Vasudeva discloses the method as in claim above, but does not explicitly disclose associating the enabled probe identification with metadata.

However, Meek discloses an analogous method using metadata tables for storing parameters ("**metadata table**" Col 7, line 8).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to combine the use of metadata table of Meek in Vasudeva's method for associating probe identification with the metadata tables. One of the skilled in the art would have been motivated to modify Vasudeva's method to use metadata table for storing data because "**One way to account for new types of data or changes in... format is through the use of one or more metadata tables**" (see Meek Col 7, line 6-8).

As per claim 6:

Vasudeva and Meek disclose the method as in claim 5 above; and Meek further discloses:

wherein the metadata defines the layout of the data ("**...format is through the use of one or more metadata tables**" Col 7, line 7-8).

As per claim 7:

Vasudeva and Meek discloses the method as in claim 5 above; and Meek further discloses:

wherein the metadata includes at least one selected from the group consisting of an action name, a module name, a data size, a data type, and an action function ("**One way to account for new type of data... through the use of metadata tables**" Col 7, line 6).

As per claim 8:

Vasudeva discloses the method as in claim 1 above, but does not explicitly disclose wherein the enabled probe identification is associated with metadata.

However, Meek discloses an analogous method that uses the metadata for storing data ("**metadata tables**" Col 7, line 8).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to combine the use of metadata table of Meek in Vasudeva for associating the probe identification with the metadata. One of the skilled in the art would have been motivated to combine because "**One way to account for new types of data or changes in...format is through the use of one or more metadata tables**" (see Meek Col 7, line 6-8).

As per claim 10:

Vasudeva discloses a method for processing a data set, comprising:

- a. copying the data set to a user-level buffer ("**allocate a queue to store data**" Paragraph 0062), wherein the data set comprises an enabled probe identification and data ("**the probe may allocate a queue to store data received by each probe... the base station may be configured to receive data from the associated or attached probes and may store an identifier for the probe**" Paragraph 0062, each probe associating with the data it's gathering, and

therefore, the data set containing probe id in order to identify the data for each probe); and

b. obtaining the enabled probe identification from the data set ("**received data from the associated or attached probes and may store an identifier for the probe**" Paragraph 0062, the received data includes probe identification in order to identify the data for each probe).

c. processing the data set using the data set ("**the probe application 253 may produce trends and reports by executing queries on the collected data stored in relational database**" Paragraph 0053).

Vasudeva does not explicitly disclose:

d. obtaining metadata using the enabled probe identification ();

e. processing the data set using the metadata ().

However, Meek discloses an analogous method that uses the metadata table for storing data ("metadata tables" Col 7, line 8).

Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to combine Meek's metadata table in Vasudeva's method in order to obtaining metadata using the enabled probe identification and processing the data set using the metadata. One of the skilled in the art would have been motivated to use metadata table in Vasudeva's approach because "**One way to account for new types of data or changes in... format is through the use of one or more metadata tables**" (see Meek Col 7, line 6-8).

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As per claim 11:

recites the same limitation as recited in claim 6, and therefore, has been addressed in connection with the rejection of claim 6.

As per claim 12:

recites the same limitation as recited in claim 7, and therefore, has been addressed in connection with the rejection of claim 7.

As per claim 15:

Vasudeva discloses the system as in claim 13 above, but does not explicitly disclose an EPID-Metadata table relating the enabled probe identification to metadata.

However, Meek discloses an analogous system that uses metadata tables for storing data ("metadata tables" Col 7, line 8).

Therefore, it would have obvious to one having an ordinary skill in the art at the time the invention was made to combine Meek's metadata tables with Vasudeva's system in order for a metadata table relating the enabled probe identification to metadata. One of the ordinary skill in the art would have been motivated to use metadata in Vasudeva's system because **"One way to account for new types of data or changes in...format is through the use of one or more metadata tables"** (see Meek Col 7, line 6-8).

As per claim 16:

recites the same limitation as recited in claim 7, and therefore, have been addressed in connection with the rejection of claim 7.

As per claim 19:

recites the same limitation as recited in claim 15, and therefore, has been addressed in connection with the rejection of claim 15.

As per claim 20:

recites the same limitation as recited in claim 7, and therefore, has been addressed in connection with the rejection of claim 7.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Yue (United States Patent No.: US 6,457,143 B1) discloses system and method for automatic identification of bottleneck in a network.
- b. Moore (United States Patent No.: US 6,769,117 B2) discloses generalized program hooks.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip H. Nguyen whose telephone number is (571) 270-1070. The examiner can normally be reached on Monday - Friday 10:00 AM - 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PN
11/28/06

Wei Zhen
Supervisory Patent Examiner


WEI ZHEN
SUPERVISORY PATENT EXAMINER